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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,297	07/06/2001	Makoto Yoshida	033211-010	7675

7590 12/13/2005

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EXAMINER

MAGEE, CHRISTOPHER R

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,297

Applicant(s)

YOSHIDA ET AL.

Examiner

Christopher R. Magee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-9 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claims 1-3, 6-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshikawa (JP 03-162705) in view of Williams et al. (hereinafter Williams) (US 5,949,927).

Regarding claims 1-3 and 9, Koshikawa teaches a thin-film magnetic head comprising:

an inductive write head element including an upper core layer with a front end section magnetically coupling with an upper magnetic pole [16], a lower core layer with a front end section magnetically coil conductor [15] formed coupling with a lower magnetic pole [12], a coil conductor [15] formed to pass between said upper core layer and said lower core layer, and an coil insulation layer [14] for sandwiching said coil conductor; and

at least one thermal diffusion layer [21] with a good thermal conductivity formed on said coil insulation layer [14] at an outside region of said upper core layer, said at least one thermal diffusion layer being in contact with a part of said coil conductor or constituting a part of said coil conductor [Fig. 1].

Koshikawa does not show the coating film is made of a material selected from Ti, Cr, Ta, Ni, Fe, Coe Au, Pt, Rh and Ru, or an alloy containing at least Ti, Cr, Ta, Ni, Fe or Co.

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Referring to claims 6, 7, 12 and 13, Koshikawa shows all the features, *supra*, except at least one thermal diffusion layer is made of a material with a thermal conductivity higher or lower than that of Al_2O_3 .

Referring to claims 8 and 14, Koshikawa shows all the features, *supra*, except at least one thermal diffusion layer is made of a material selected from Au, Ag, Is, Zn, Al, Ir, Cd, Sb, W, Ta, Fe, Pb, Ni, Pt, Pd, Mg and Mo, or an alloy containing at least one of Au, Ag, Is, Zn, Al, Ir, Cd, Sb, W, Ta, Fe, Pb, Ni, Pt, Pd, Mg and Mo.

Williams discloses mechanical and thermal properties of various materials used in thin film inductive read-write heads as stress buffers [col. 2, lines 45-58].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the thermal diffusion layer of Koshikawa with various materials as taught by Williams.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to substitute the thermal diffusion layer of Koshikawa with various materials as taught by Williams in order to minimize popcorn noise and domain instability in thin film read-write inductive magnetic recording heads [Williams; col. 2, lines 58-65].

Response to Arguments

2. Applicant's arguments, see Remarks, pages 14-17, filed 10/05/2005, with respect to the 35 USC § 102 rejection(s) of claim(s) 1-4, 9 and 10 under Koshikawa (JP 03-162705) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However,

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upon further consideration, a new 35 USC § 103 ground(s) of rejection is made in view of Williams et al. (hereinafter Williams) (US 5,949,927).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (571) 272-7592. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

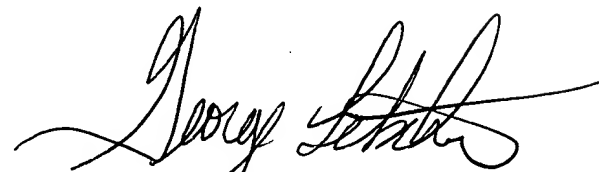
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christopher R. Magee
Patent Examiner
Art Unit 2653

December 9, 2005
crm


GEORGE J. LETSCHER
PRIMARY EXAMINER